Exhibit 111 Part 1

Chrysotile PLM Dispersion Staining Colors (ISO)

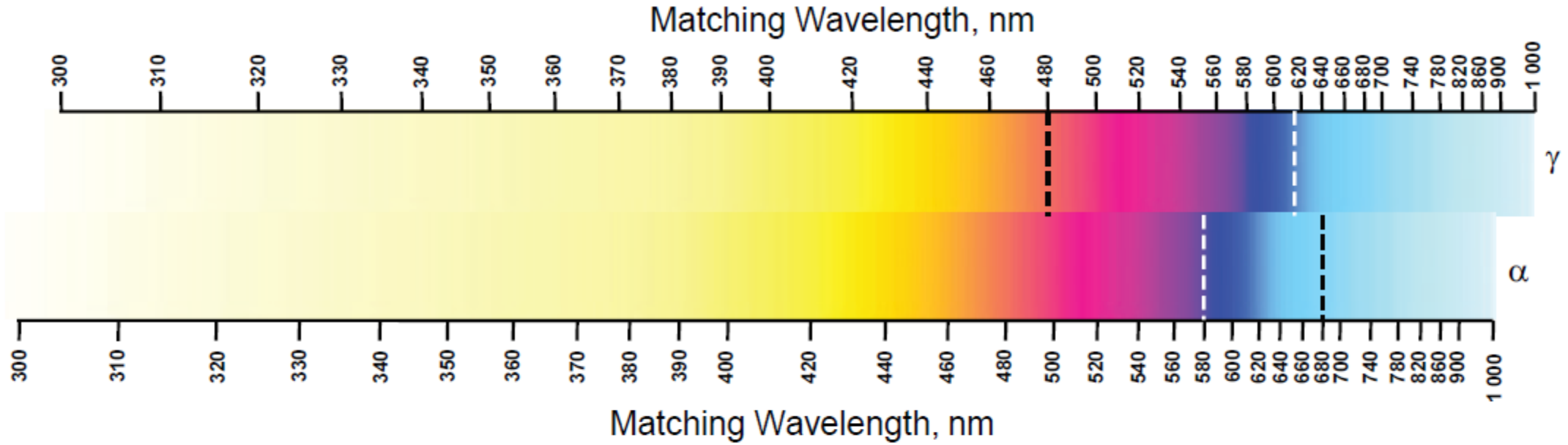


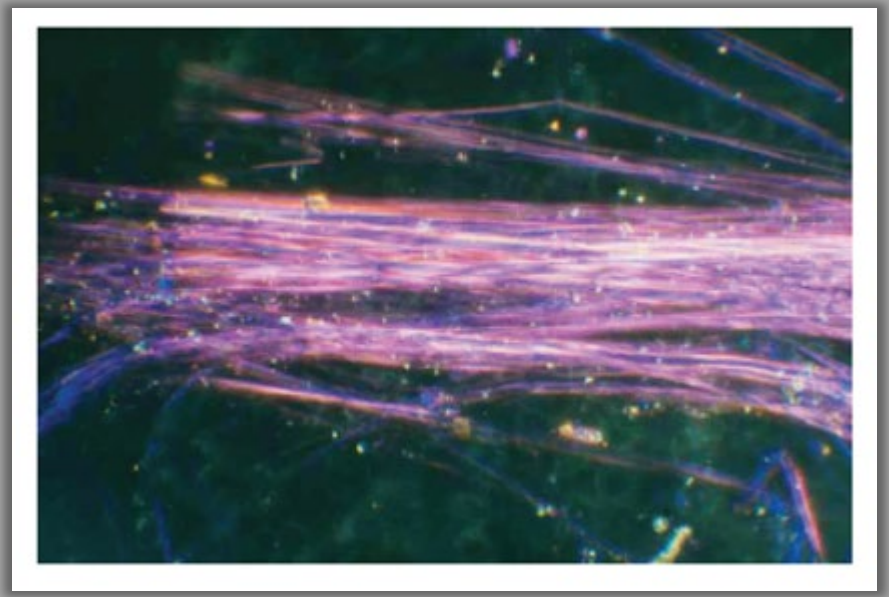
Figure C.1 — Central stop dispersion staining colours for chrysotile in 1,550 RI liquid

EXHIBIT 4
WIT: William Longo
DATE: 3/3/2023
iDepo

DX-19933

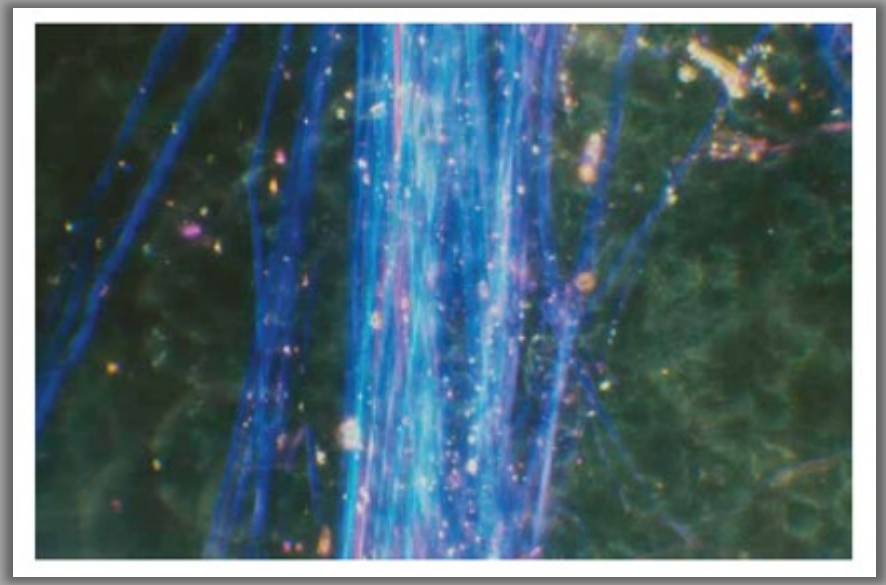
ISO Reference Chrysotile: Parallel

ISO Reference Chrysotile

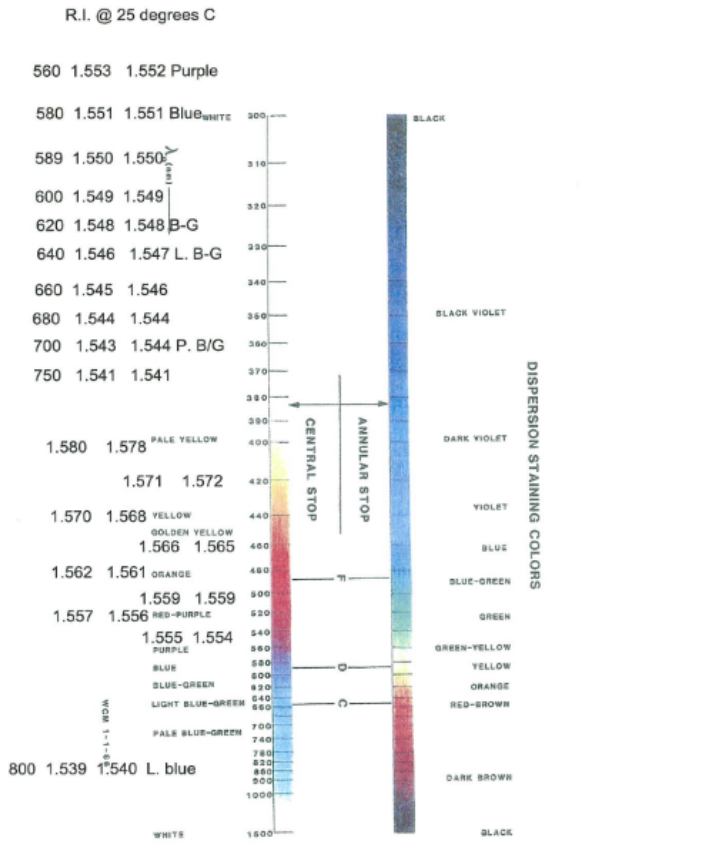


ISO Reference Chrysotile: Perpendicular

ISO Reference Chrysotile



Dr. Longo's PLM Dispersion Staining Chart



DEFENDANT'S
J&J EXHIBIT
DX-21212

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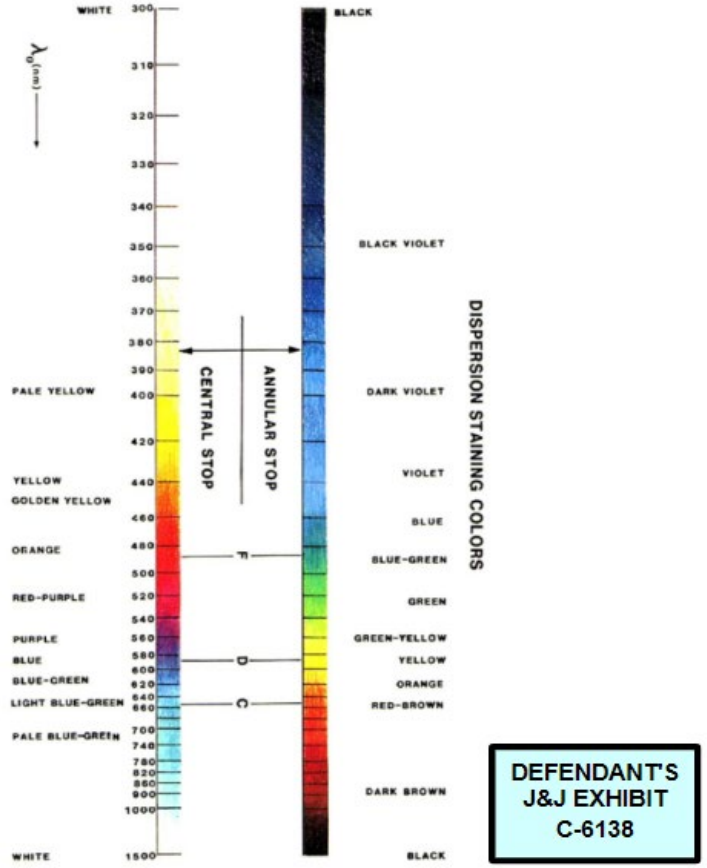
Dr. Su's PLM Dispersion Staining Chart



DEFENDANT'S J&J EXHIBIT C-6138

F g 1. Con erting dispersion staining color to corresponding λ_o McCrone, 1987).

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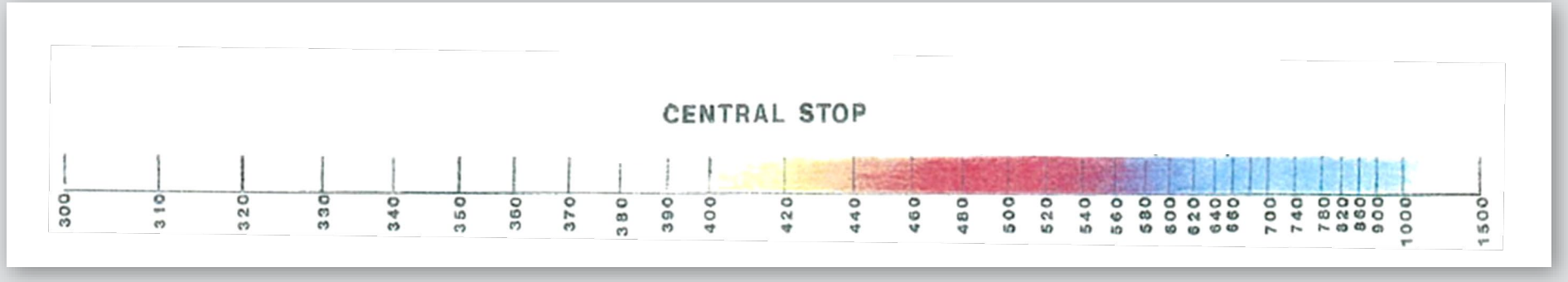
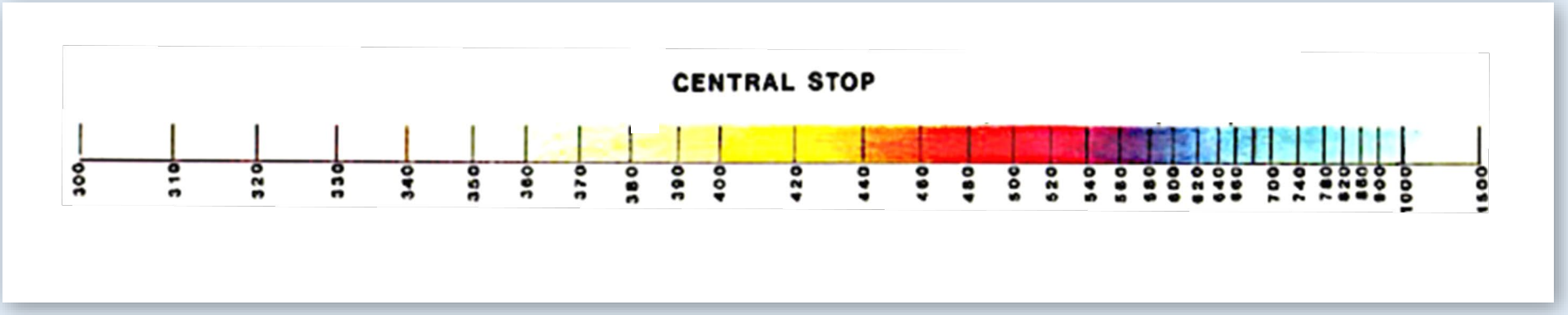
PLM DISPERSION STAINING CHART

Dr. Longo's Version

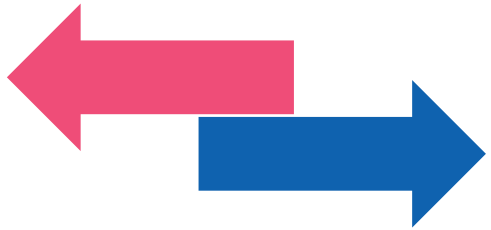


Original Version



Birefringence of Talc vs. Chrysotile

Chrysotile: **Lower** Birefringence (Colors **Closer Together**)



Talc: **Higher** Birefringence (Colors **Farther Apart**)

"Golden Yellow" Images

SHADE OF YELLOW IMPACTS ONE SIDE OF BIREFRINGENCE

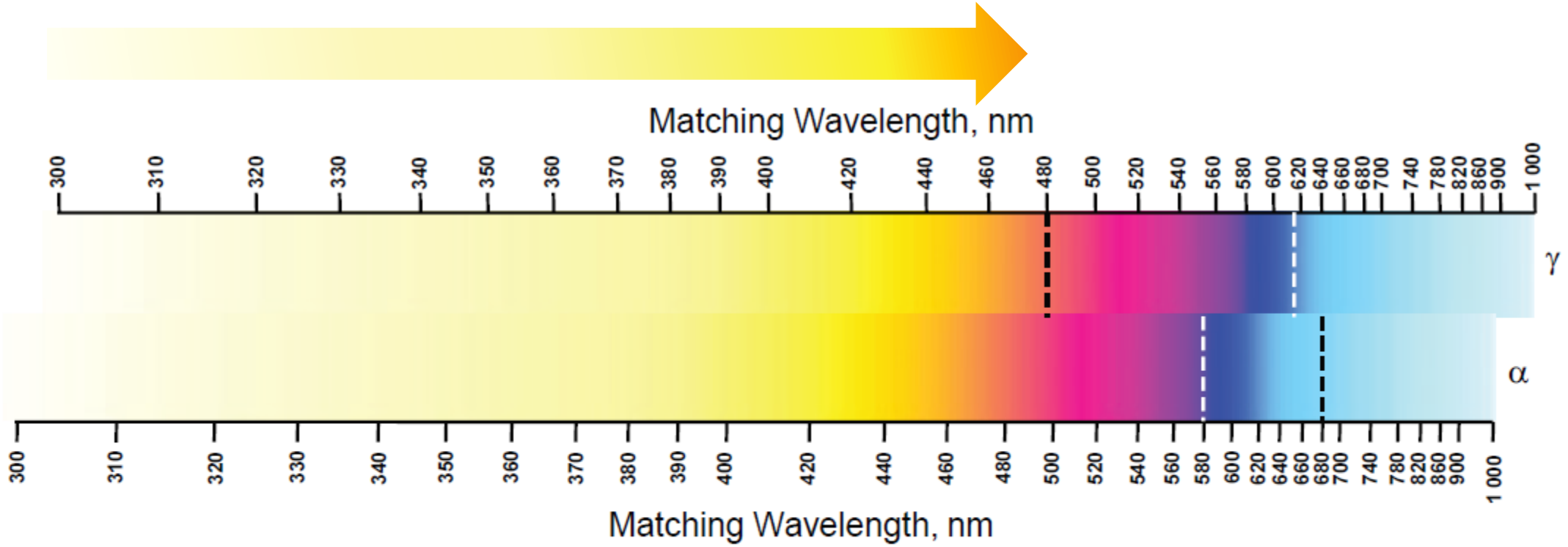
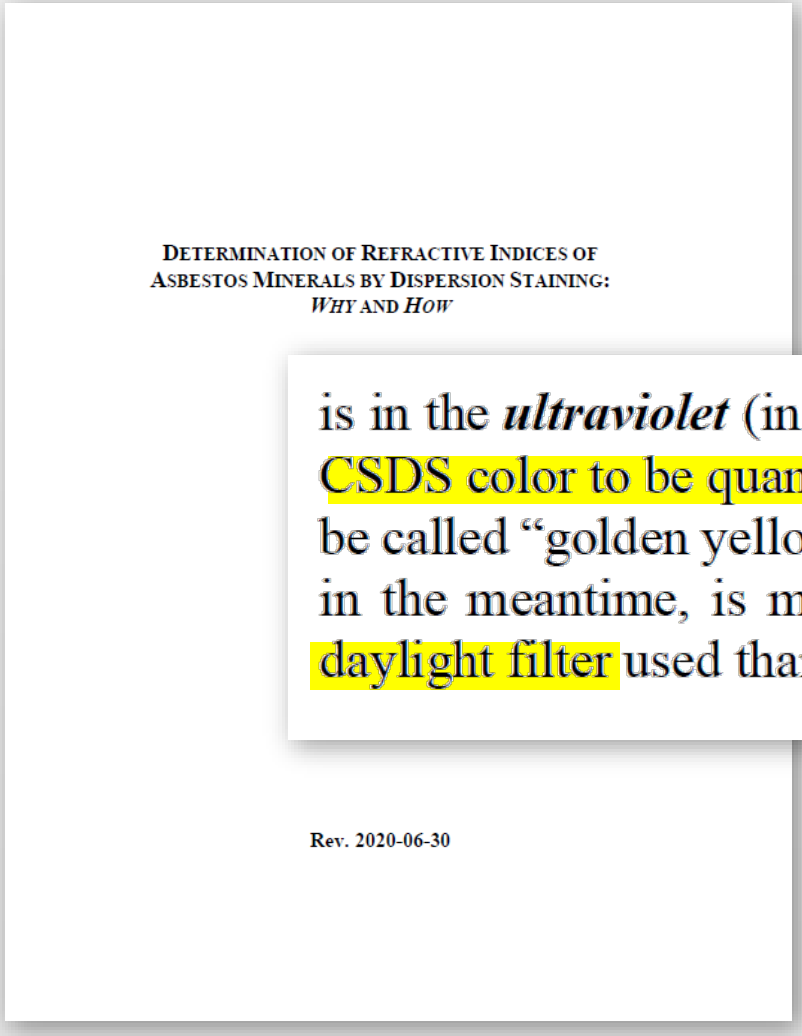


Figure C.1 — Central stop dispersion staining colours for chrysotile in 1,550 RI liquid

Dr. Su's Method: Avoid Yellow "At All Cost"



DETERMINATION OF REFRACTIVE INDICES OF ASBESTOS MINERALS BY DISPERSION STAINING: *WHY* AND *HOW*

Rev. 2020-06-30

is in the ***ultraviolet*** (instead of the visible) range. Experience tells us that "yellow" is the hardest CSDS color to be quantified and should be avoid at all cost. The same yellow CSDS color could be called "golden yellow", "yellow", "light yellow", "pale yellow", etc., by different analysts and, in the meantime, is more susceptible to the color temperature of light source and the type of daylight filter used than other CSDS colors.

Yellow Interpretation Problem Not Limited To Amphiboles

BY MR. HYNES:

Q. Okay. And that issue about the interpretation of the color yellow, that's not limited to just amphibole structures, that's something that Dr. Su, in this document, is noting is a problem inherent to the interpretation of structures that show the color yellow

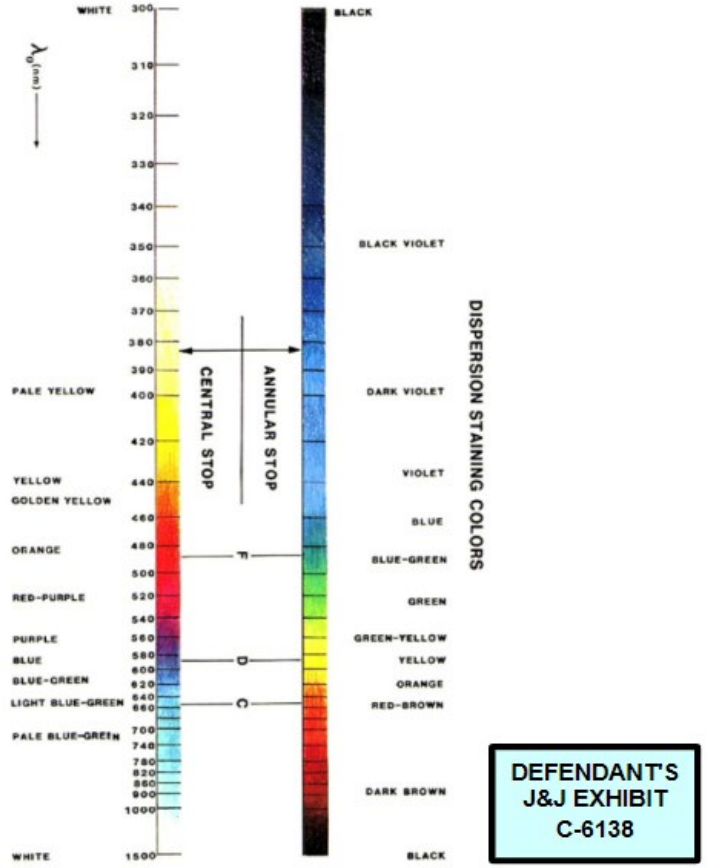
in central-stop dispersion standing oils, right?

MR. KRAMER: Objection to form.

THE WITNESS: Yes. He doesn't ever put that in any of the handouts that he gave out in the past, it was always amphiboles. But now, surprisingly -- not surprisingly, he's now stepping in this.

Davis Deposition (2/22/23) at 99:21-100:6

Dr. Su's PLM Dispersion Staining Chart

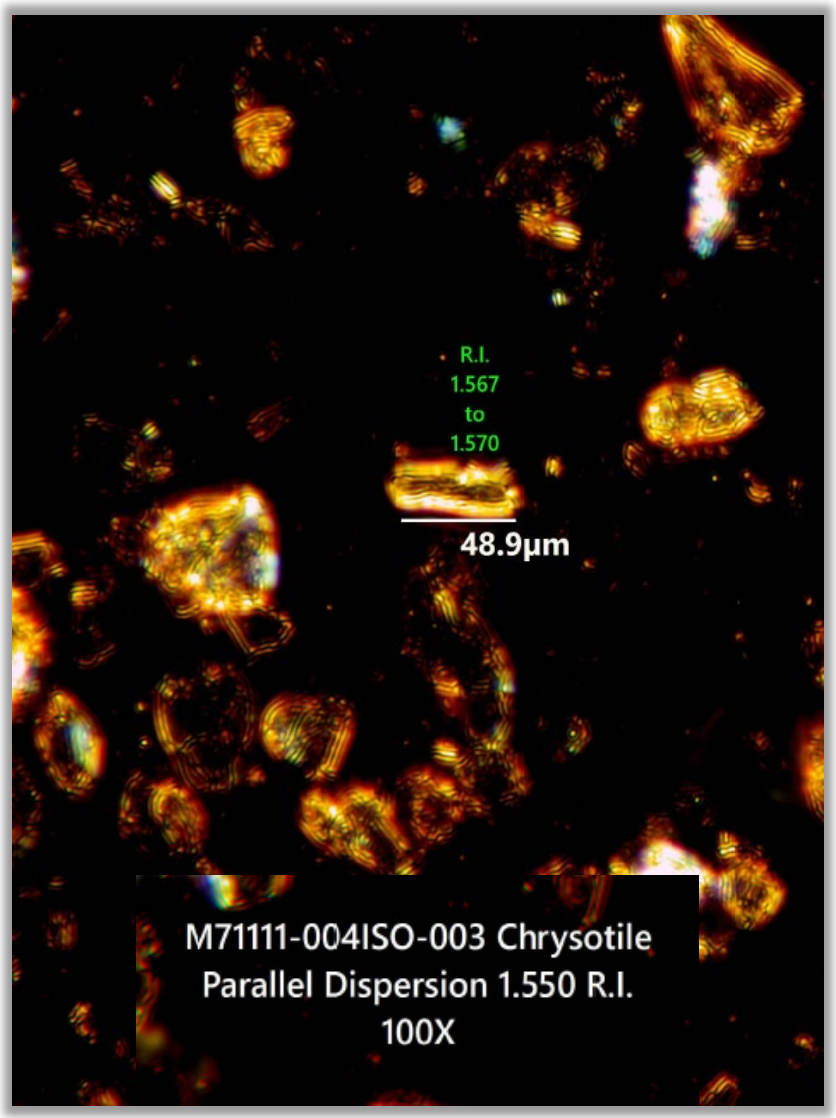


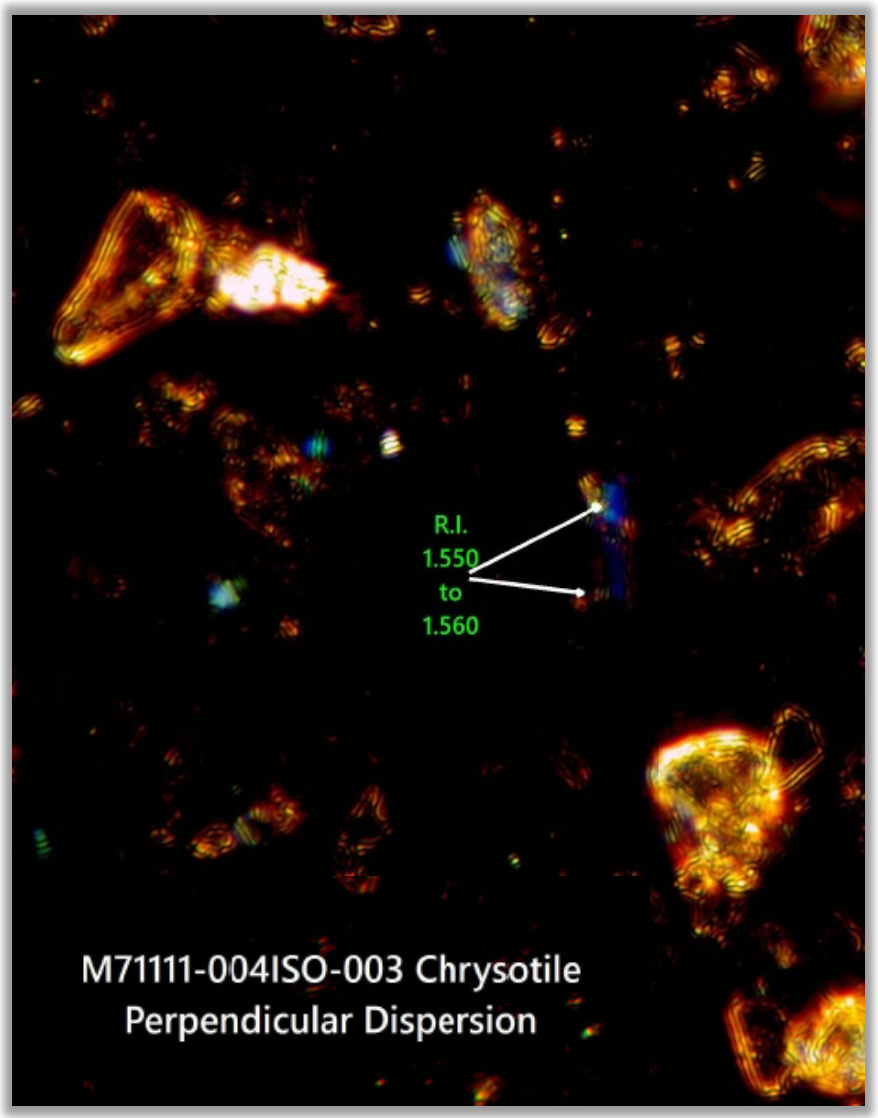
DEFENDANT'S J&J EXHIBIT C-6138

Fig 1. Converting dispersion staining color to corresponding λ_o McCrone, 1987).

C-6138 Page 1 of 1

Dr. Longo's "Chrysotile": White Balancing





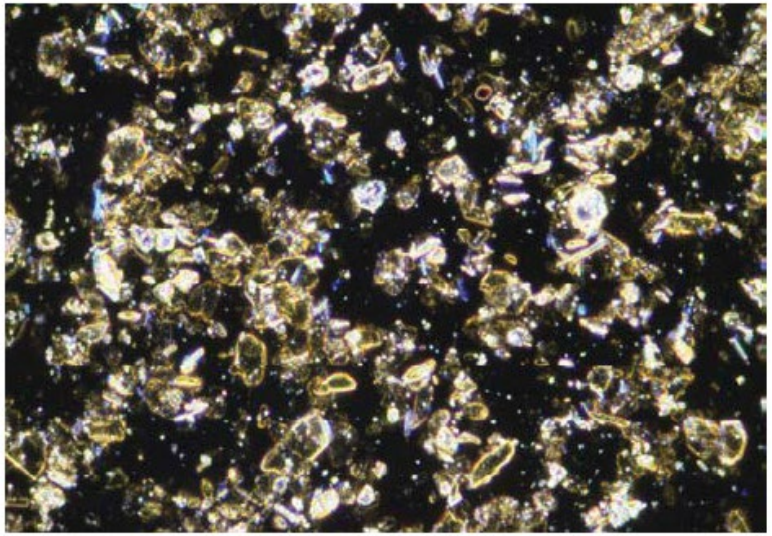
Longo's 9/16/2020 Report on Project M71109-M71111 at 296-297

White Balancing

Appropriately White Balanced PLM Analyses

Mr. Poye's PLM (VT talc)

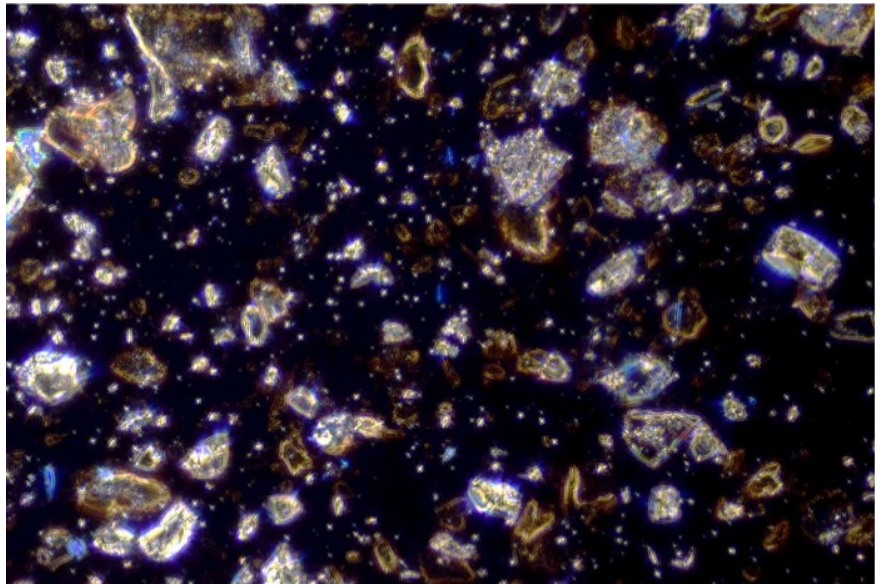
No asbestos was detected by PLM.



100X Magnification dispersion staining of Talc Particles 1.550 refractive index oil

Dr. Sanchez's PLM (VT talc)

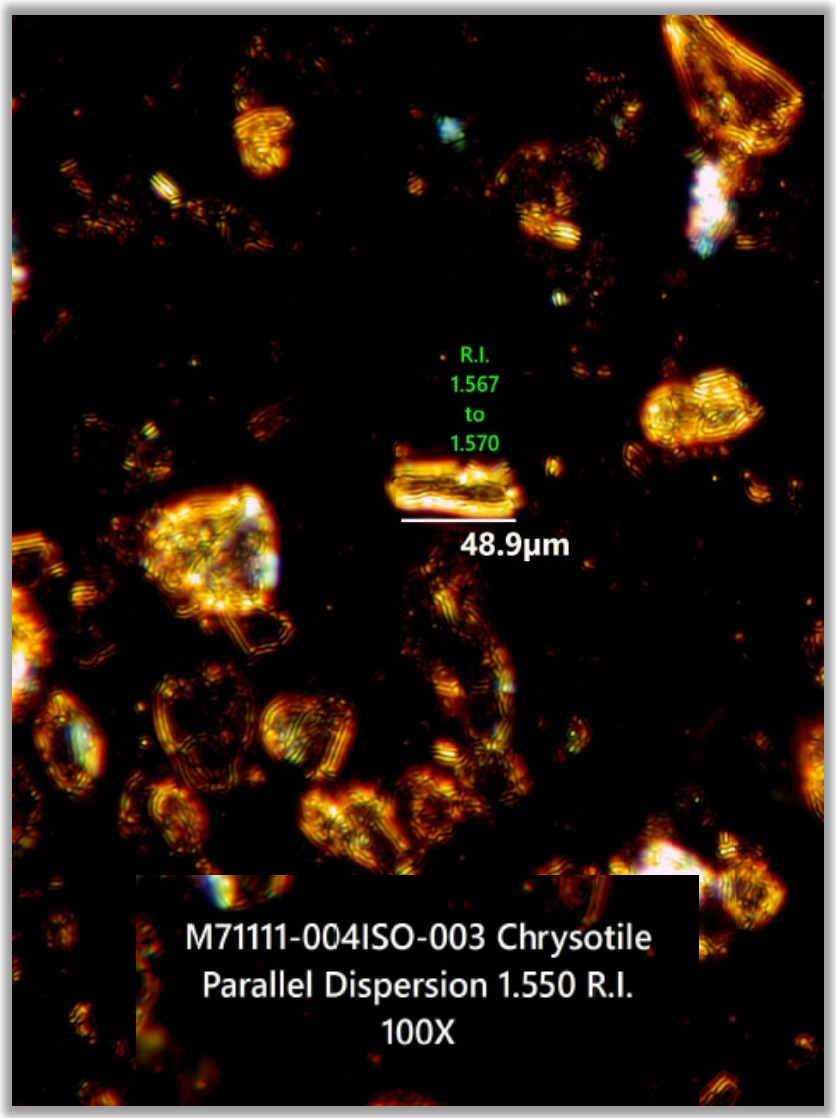
No asbestos detected

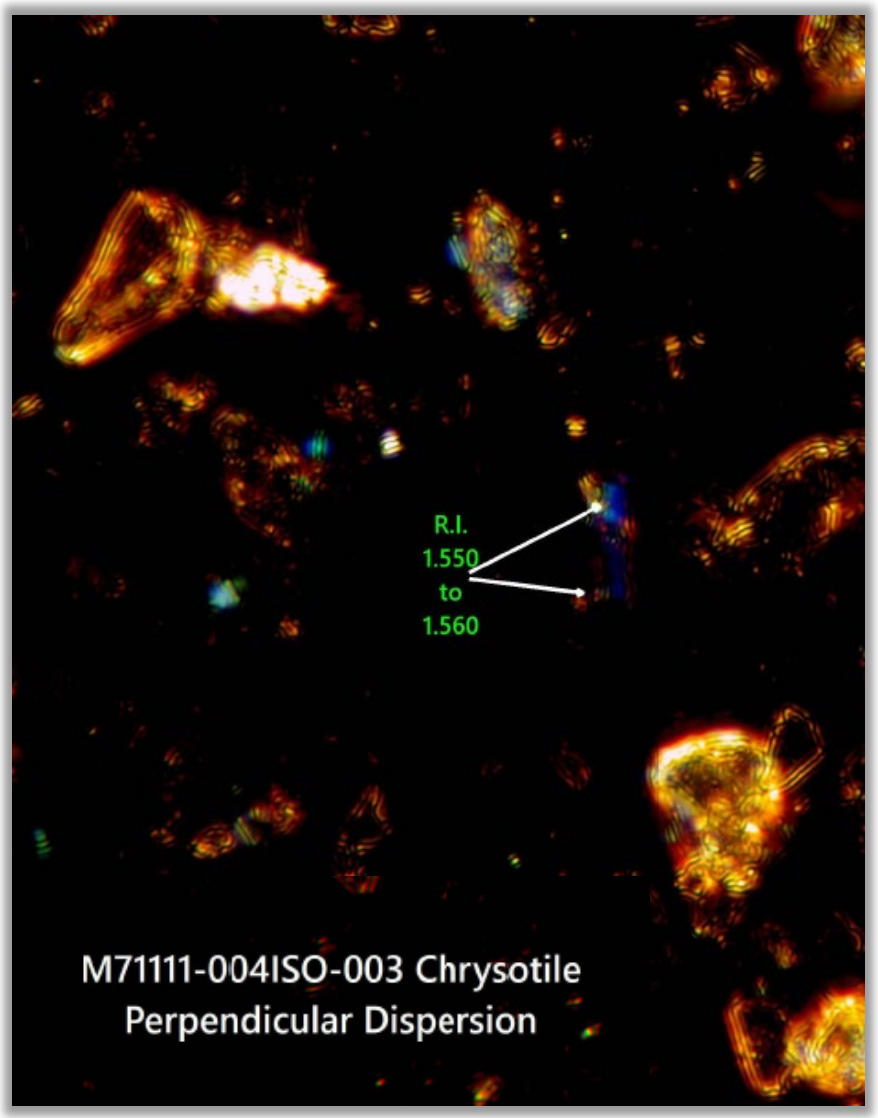


1.550 refractive index oil

DX-21150.005; DX-21111.021 at 12

Dr. Longo's "Chrysotile": White Balancing

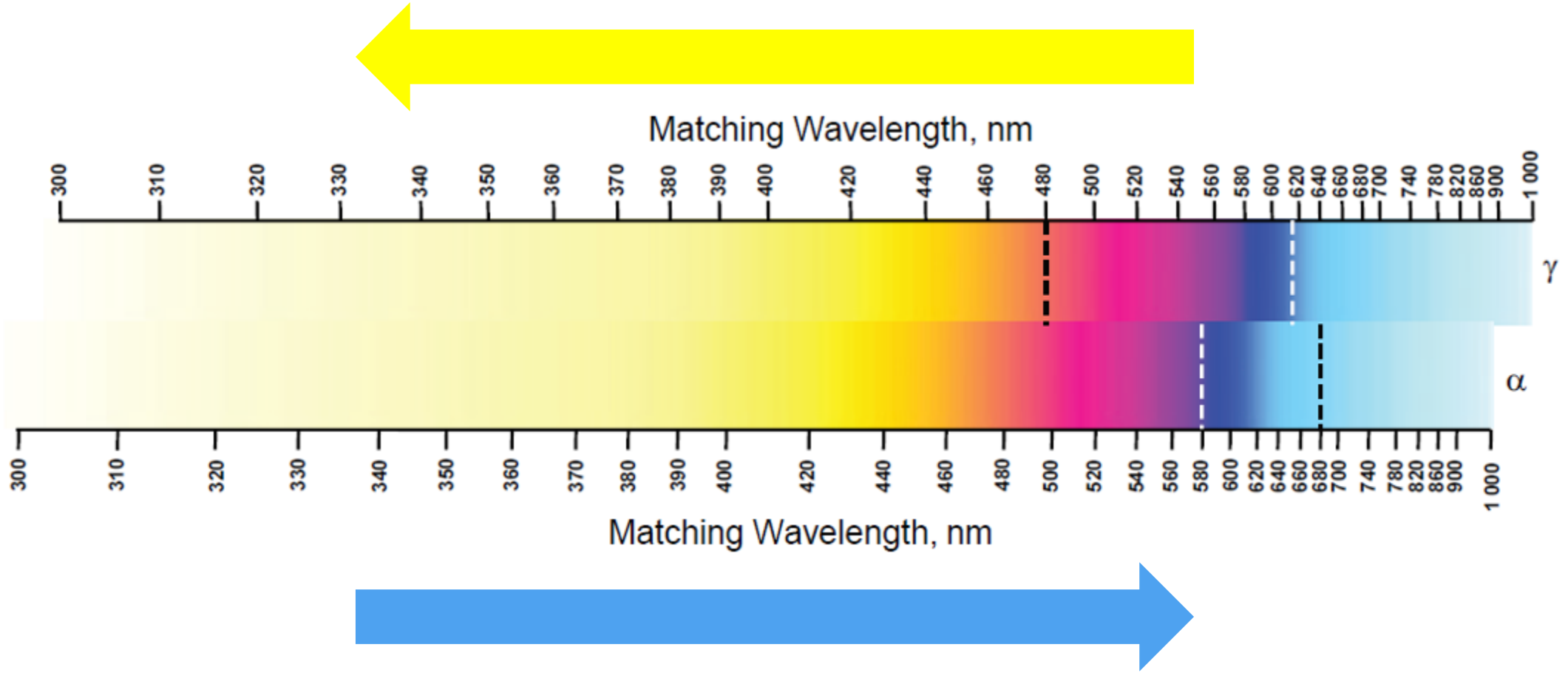




Longo's 9/16/2020 Report on Project M71109-M71111 at 296-297

How Should Birefringence Be Calculated?

Parallel: **Highest** (Farthest to the **Left**)

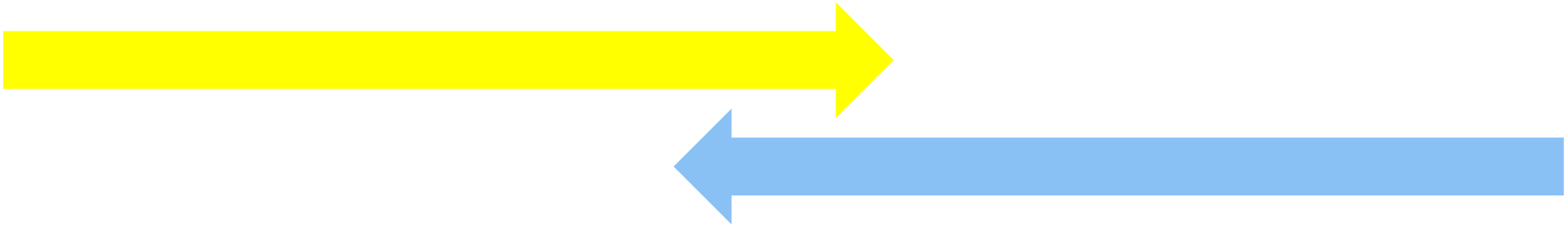


Perpendicular: **Lowest** (Farthest to the **Right**)

DX-19933

Dr. Longo Uses Averages

Moves Refractive Index Values **Closer Together**
(**More Like Chrysotile**)



Averages Not In Published Method

Q. Well, but I want to make -- I want to make crystal clear that there's no question you're using averages instead of high or low. Right? High and low.

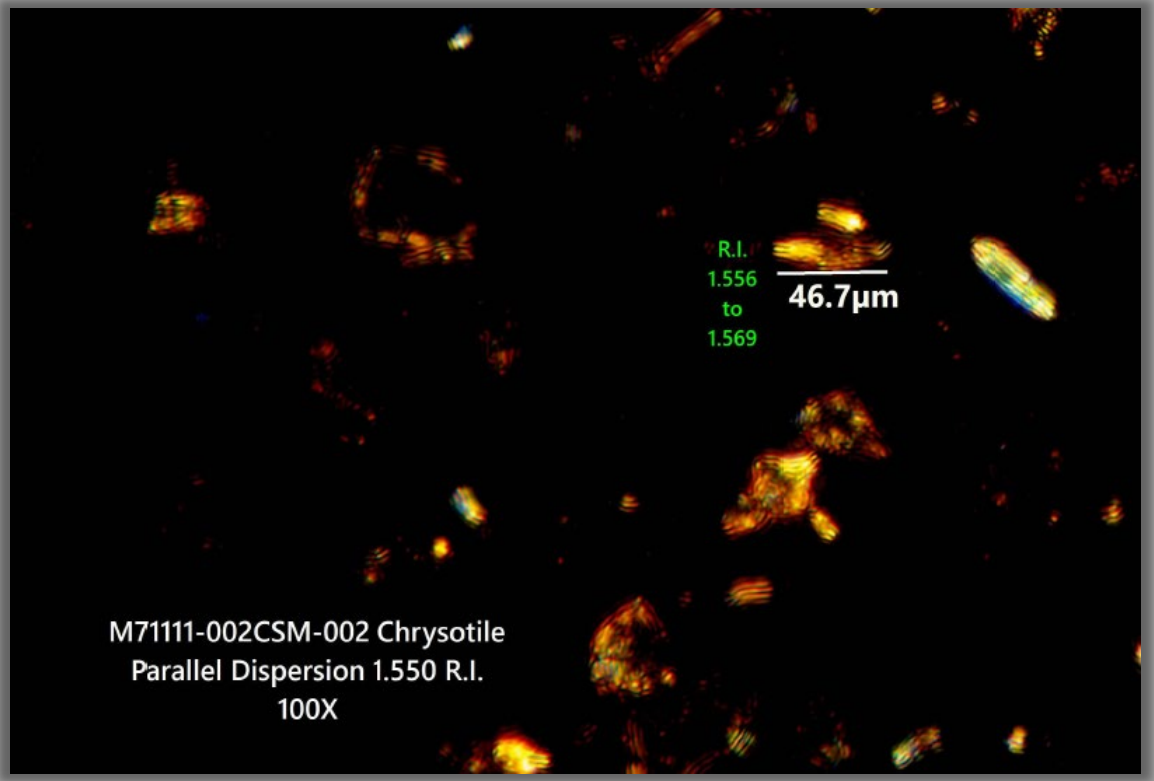
A. We do use an average, yes, as I've stated. 09:36:52

Q. And in terms of that technique, you don't know of anywhere where the technique that you're using has been published or put into a scientific method; right?

A. I'm not aware of any, no.

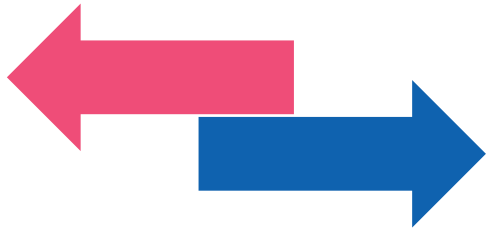
Prudencio Trial 7/7/21 at 5147:17-24 (PDF Page 56)

Dr. Longo's Chrysotile: What Color Is This?



Birefringence of Talc vs. Chrysotile

Chrysotile: **Lower** Birefringence (Colors **Closer Together**)



Talc: **Higher** Birefringence (Colors **Farther Apart**)